

Docket Number ET00-001CIP

PATENTS

simulate a negotiation, to generate a Pareto-optimal agreement or to identify which terms and inputs are significant to a Pareto-optimal analysis.

In fact, the INSS article makes it quite clear that the values assigned to terms (called options (values) and issues (similar to terms) in INSS) are irrelevant to its Pareto "analysis". While sounding complex, a Pareto-optimal agreement is nothing more than one which could not be improved for one party without making it worse for the other. Historically, negotiation support systems (NSS) might have attempted to perform an objective analysis of the values of the terms in an agreement to determine this. That is, they might have tried to find an agreement say, with better price terms for both parties than the one they agreed upon. This could be useful if price is the most important factor for both parties. However, it is often the case that objective measures such as price or delivery times are not as important to the parties as other, more subjective factors.

Thus some modern NSS systems typically do not attempt objective analysis of terms at all. Instead, they rely solely, as INSS expressly does (as will be seen below), on subjective ratings which the users supply. Thus it is irrelevant which agreement might "objectively" be better or optimal for both parties. It is also irrelevant which terms are significant for Pareto optimality for two reasons. First, INSS doesn't analyze the terms (issues and options in INSS), for Pareto analysis—it only looks at ratings. Second, the users of INSS are asked to rate all the terms and combinations and values—thus no one term (issue) or value (option) is more significant than another—all get ratings. As will be seen, this makes the computation of Pareto-optimality a simple arithmetic problem of comparing ratings that does not require analyzing terms (issues and options) at all.

Docket Number ET00-001CIP

PATENTS

"There are only two issues in this simple negotiation: the *price* of the aircraft and the *terms of the warranty*. It has been established that the normal price of this aircraft is in the range of \$300,000 to \$320,000. The sensible increase is of \$10,000. Thus, the price *options* are \$300,000, \$310,000, and \$320,000. In this industry there are four types of warranty typically available. The options are: no warranty, a 6 month, one year, and a 2 year warranty.

Both negotiators analyze the two issues and their associated options in terms of their relevance to their respective organizations and move to the pre-negotiation phase. [Underlining emphasis added.]

As the rest of this example shows, all the possible terms and all the possible values (issues and options in INSS terminology) of this negotiation are already in the model as some combination of the two issues (terms) with their respective options (values).

In this aircraft example, from the INSS article there would be 12 possible sets of issues and options that would make up an aircraft model:

AIRCRAFT MODEL:

Package No.	Issue 1	Issue 2	Maki's rating	Suny's rating
1	\$300,000	0	30*	70*
2	\$300,000	6 mos.	15*	80*
3	\$300,000	1 yr	20*	100*
4	\$300,000	2 yr	0*	90*
5	\$310,000	0	50*	40*
6	\$310,000	6 mos.	40*	50*
7	\$310,000	1 yr	30*	60*
8	\$310,000	2 yr	25*	30*
9	\$320,000	0	100	0*
10	\$320,000	6 mos.	75	20*
11	\$320,000	1 yr	90	15*
12	\$320,000	2 yr	60	10*

* Ratings marked with an asterisk are hypothetical and not taken from the INSS article.

Again, in the glossary at Page 20, a package is defined as

"A particular combination of options that has been selected across all the issues. For example,

Price	3000\$
Payment	Upon Delivery
Failure rate	5%

Docket Number ET00-001CIP

PATENTS

Thus it can be seen that for each case used for the mock negotiations using the INSS simulation system, all the variables are known ahead of time and inserted into the case or model by issue name and option value prior to any mock negotiation. For the aircraft model, issue (term) one can have three options (values)--\$300,000, \$310,000 or \$320,000. Issue (term) 2 can have four options (values): 0, 6 months, 1 year or 2 years. The combination of three options (values) for issue 1 and four options (values) for issue 2 results in 12 possible outcomes or packages, as seen above. They can be stored in the computer in a simple table similar to aircraft model shown above, or in similar arrangements in a file. Not only is there no disclosure of analysis by the INSS simulator to understand the purpose of the terms in the INSS article, there is no need or requirement for analysis to understand the purpose of the terms, or in the case of INSS, the issues, since all of their possible values (options) must already be known ahead of time by the simulator.

In the two examples cited in the INSS article, it does not matter whether the name of issue 1 in case 1 is annual salary or as in the aircraft model, issue 1 is named price. What matters is that all the possible options or values for that issue number are specified ahead of time so the case can be built. The simulator neither knows nor cares that it is simulating a price negotiation as opposed to a salary negotiation. It does not analyze terms or need to analyze them, during a mock negotiation, since they are predefined in the model as issues and options. All that is needed for the INSS simulator to operate is a set of pre-defined issues (terms) and options (values).

Docket Number ET00-001CIP

PATENTS

This pre-definition is made even clearer on Page 17, where the INSS article states, under the heading "INSS FAQ (Frequently Asked Questions)", question no. 2:

"2. I have requested a negotiation already. When can I start my negotiation? Your negotiation will be set up typically within 2-3 days. INSS will notify you via e-mail, (specifying your negotiation name and user name), after which you can start your negotiation right away."

The set up mentioned here refers back to Page 6, "Describe a new negotiation case, where the article states, "You can request that a new negotiation case be set up for you by submitting this form."

Neither of the players who use the INSS simulator for a mock negotiation supply the values (options) for the issues during their mock negotiations. These values have already been programmed into the case they are using before the mock negotiation begins. In fact, unless one of the players is the one who requested that the case be constructed, neither of the players provides any input at all for "terms" (issues and their options) when he or she uses the INSS simulator.

Page 8, for example, shows the aircraft case which has been set up by the authors to show how to use INSS. In this example, players "Maki" and "Suny" do not supply any of the options for issues 1 and 2. Since the "terms" (issues) and all possible values (options) they can have are pre-programmed into a case before a mock negotiation can begin, there is no need for, and no disclosure of any analysis done by the INSS simulator to understand the purpose of the terms (issues). Unlike applicants' invention, which analyzes terms during iterations of a negotiation to understand their purpose, it is irrelevant to the INSS simulator whether an "issue" is a price term or a warranty term

Docket Number E100-001CIP

PATENTS

or a salary term or a vacation term. INSS only deals with predefined options for named issues as these are stored in the model.

Nor is there any disclosure of which terms (issues) relate to which party either before mock negotiation begins or during it. The values (options) for all the terms (issues) are supplied in advance by the person who creates the case, not by the parties during a mock negotiation. Since the person who builds the case need not be, and, more frequently, is not likely to be, either of the players who use the simulation case, it is clear that INSS also does not relate the terms (issues) to either player. In the aircraft case example, all the values (options) for all the terms (issues) have been supplied in advance by the authors, to show how to use INSS. There is no way in which INSS can relate any of the price (\$320,000) or warranty (2 years) option values to player "Maki" or "Suny", since neither player supplied them. Therefore, the rejection is also incorrect in stating that INSS must identify which terms (issues) relate to which party.

What the players do supply are subjective ratings for the issues and values, but this, too, is done before any mock negotiation can begin and in such a way that the simulator does not provide any analysis.

At page 2, for example, under the heading "Using INSS" it states:

There are three basic steps that are usually followed in any negotiation: Preparation for the negotiation, during which you study the situation, identify the stakeholders, and develop a very clear understanding of the issues and interests involved. To help you do this step, INSS provides you with a detailed description of your negotiation case and then guides you through a sequence of pages on which you tell the system how important each issue and alternative is to you. This step is also called preference elicitation. The information so obtained is used by INSS in the next step to give you helpful feedback when constructing new offers or evaluating your counterpart's offers." [Underlining emphasis added]

Docket Number ET00-001CIP

PATENTS

Again, this information about how each player rates the data is collected before a mock negotiation begins. At Pages 8 and 9, under the headings "Using INSS: An Example", and "Preparation", the article describes three types of ratings the players are asked to do: Issue rating, Option rating and package evaluation.

In the example on page 8, of the aircraft case, the players Maki and Suny are first asked to rate the two issues. As the article notes :

"Maki feels that price is far more important than warranty. Therefore, she assigns 70 points to price and 30 to payment {sic—this presumably should have been warranty}. Although Maki does not know it, Suny feels that each issue is equally important and so Suny assigns 50 points to each."

On Page 9, under the heading Option rating, it is stated:

"After rating the issues, the options in each issue must also be rated similarly. In the INSS system, for each issue at least one option must be assigned the maximum rating for the issue and at least one option must be assigned a rating of zero." [Emphasis added.]

Note that this makes it even clearer that all the values (options) for the variables of a negotiation have been supplied in the case beforehand. What the players must do is rate the subjective importance to them of these issues (terms) and these actual values (options). This is seen in the two tables showing player Maki's ratings for the issue 1 and issue 2 options.

At this point, since all the possible values (options) for the only two issues in this case are known, INSS also asks the players to evaluate packages—i.e. combinations of issues and options, such as those Applicants' attorney has listed above in the aircraft model. Package 9 in that table is the same as the first package listed in the INSS article on page

Docket Number ET00-001CIP

PATENTS

9 for Maki—namely issue 1 having an option of \$320,000 and issue 2 having an option value of no warranty. Maki's rating of this package is 100.

As INSS makes clear, the ratings by the players must be also be done before any mock negotiation can begin.

The rejection of Applicants' claims suggests that INSS sends and receives terms along a communications path and that this is involved in the determination of Pareto-optimality. Applicants believe they have shown that in fact, neither party using INSS enters issues, options or ratings during a mock negotiation. All possible issues and options were entered by the person who created the case beforehand. Thus INSS cannot identify which issues and options relate to which party, since there is no way for a person creating a case to indicate this and no way for the players to do so either.

INSS also does not analyze terms to understand which are significant to a Pareto-optimal outcome. By having the players rate the issues and options, the users or players specify the data (their subjective ratings) to be used for determining a Pareto-optimal outcome—not the INSS system. Applicants respectfully submit that Pareto-optimality sounds more complicated than it is. In this context, it simply means that based on the subjective ratings the players provide ahead of time for each predefined package, there could be one or more packages that are better for both players (have a higher subjective rating for both players without making either player worse off) than the one they may initially choose.

Docket Number ET00-001CIP

PATENTS

Note that it is explicitly stated in INSS that this notion of "better" does not take into account any of the values supplied for the issues and options. It does not matter what the issue 1 and issue 2 values actually are for the INSS system in the aircraft model example cited. All that matters for a Pareto-optimal result is that both players may have subjectively rated one or more packages as better than a package they have agreed upon.

This is made clear at Page 12, under the heading "Post-Settlement":

"Efficient packages

In some negotiations it may happen that the parties reach an agreement but there is (sic) one or more packages which are better than the accepted offer for *both* sides. Note that better is measured with the parties utility functions. Thus, there may be a package for which the two ratings are higher than the package that has been accepted.

INSS has a post-settlement stage, during which it uses the preference information provided by each user to determine whether it is possible to construct packages that are better for the two parties..."

Utility function is defined in the glossary as:

"A utility function is a subjective measurement that expresses the relative value of different package (sic) by using a numerical scale. The numerical scale used is arbitrary. It typically ranges either from 0 to 1 or from 1 to 100. The minimum number expresses the least desirable and least preferred package. The highest number represents the most desirable and preferred package." [Underlining emphasis added]

In other words, the utility function INSS uses is simply the subjective ratings the players provide for the pre-defined packages.

In the aircraft model example above, if the parties had agreed upon Package 12 during the mock negotiation, for which their subjective ratings are 60 and 10 respectively, it can be seen that Package 10 would be Pareto-optimally "better" for both of them because each of them has subjectively rated Package 10 higher than Package 12. As mentioned

Docket Number ET00-001CIP

PATENTS

above, these ratings are the player's subjective views of the importance of the issues (terms) and options (values).

Thus, it is not necessary, nor does INSS disclose or render obvious a need to understand the purpose of terms (issues) or values (options) in order to determine a Pareto-optimal package. It is done solely on the basis of subjective ratings supplied in advance for packages defined in advance. As described at Page 12, the determination of such an optimal package is not done during iterative processing of the mock negotiation, but after the conclusion of the mock negotiation. To determine if a package is Pareto-optimal, all INSS has to do is compare the parties' ratings for the various packages to see if any package has higher ratings for both of them. If none of the packages have higher ratings for both parties, then the one they agreed on in the mock negotiation is Pareto-optimal for them. This is a simple arithmetic function and has nothing to do with analyzing the issues (terms) or options (values) in the mock negotiation.

The rejection of applicants' claims in view of INSS further states that INSS processing includes:

"recognizing any changes in the terms ...".

Applicants respectfully disagree again. As applicants believe their above analysis shows, there are no changes in the terms to be detected or recognized by INSS. All possible term values (issues and options) are specified ahead of time, when the issues and options are specified so the case can be built. The players do not enter new issues or options during a mock negotiation, they select from packages or the predefined options to construct "offers".

Docket Number ET00-001CIP

PATENT'S

This is made clear at page 15, under the heading "3.Using INSS", starting at number 6:

"6. Rate the packages. A number of packages are displayed for you. Each package has a rating. Check if you agree with the ratings. If you disagree with the ratings of any of the packages change them in the box on the right-hand side of the table. Please do not try to manipulate these rankings as they are used for their own benefit.

From now on every offer (a package) which you want to consider and present to your partner will show a rating based on your preferences. Any offers sent to you by your partner will also show a rating. Remember, this rating reflects your and only your opinion. Your partner does not know your opinion nor can he or she see your ratings.

7. Fill out the pre-negotiation questionnaire.

8. Make an offer to your partner using the menus in the offer-box. You can also send messages to your partner using the message-box." [Bolding added]

It appears from this that the players do not enter option values such as \$310,000 in an offer screen during the mock negotiation. Instead, as the above excerpt from the INSS article says, the INSS simulator presents the players with a menu of the predefined packages, from which they select one—such as Package 12, for example, to use as an "offer".

Thus, an "offer" of \$310,000 and 0 warranty, is not a change in terms or a new term. It is one of the packages which was predefined when the case was set up initially. It is also a package which each of the players has already rated during the pre-negotiation rating phase. These ratings are presumably also stored in connection with the predefined packages. This is why it is a simple matter for the INSS system to "present" that offer to the other player, and along with it show to the other player that player's (Suny in this example) rating for that same predefined package.

Docket Number ET00-001CIP

PATENTS

For example, in the aircraft model for the airplane example, predefined Package 9 has a rating of 100 for Maki and a rating of 0 for Suny. If Maki "offers" package 9 to Suny, the INSS-simulator does not have to recognize any changes in order to present Package 9 to Suny. There are no changes to Package 9. Nor does INSS have to do any calculation to show Suny's pre-supplied rating of 0 for Package 9, as that value has also been previously stored. The rating Suny has previously supplied is not based on any changes in terms (issues and options), since there can be no changes during a mock negotiation.

INSS does not have to plug in the correct data into any calculations, since all the data for issues, option values, and ratings has been entered before the mock negotiation began. Even the Pareto-optimal solution(s) for the players can be determined in advance using the ratings supplied by the players. INSS only needs to wait until after the mock negotiation has completed to suggest the better solutions.

It is also a simple matter for INSS to "track" the mock negotiation without analyzing the issues or options to understand their purpose or recognizing any changes in the issues or options. All it has to do is record in a file that player 1 "offered" predefined package 3 at time x, then player 2 "counter-offered" predefined package 4 at time y, and so on.

It is a simple matter to plot the graphs shown on Page 11, since the graphs are only showing the players' predefined ratings for the sequence of packages that were "offered". Since the ratings have already been supplied in advance of any mock negotiation, they can simply be stored in a table or model. The content of the packages does not change during the mock negotiation.

Docket Number ET00-001CIP

PATENT'S

This is quite clear from each graph. On the y axis or vertical side of the graph are shown the possible ratings, and on the x axis, or along the bottom of the graph are shown the dates when "offers" were exchanged. The two lines in each graph represent the "offers" from each party. The graph on the left shows the player Maki's (Misty's?) ratings for both sets. The graph on the right is different for the other player because it shows the sets of "offers" as they were rated by that player.

Since all of the "offers" which are rated and have their ratings graphed in the article were based on predefined packages, the graphs do not show any changes in terms, because there is no way for a player to change terms during a mock negotiation. Maki's rating for Package 9 will always be 100, when that package is offered to Maki, no matter when it is offered. Similarly, Suny's rating for Package 9 will always be 0 when that package is offered to Suny, no matter when the package is offered.

What the players are doing when they use the INSS simulator is presenting offers of predefined issue and option data, as described above. It should be noted that while the primary method INSS describes for selecting these predefined issues and options uses what it calls parallel negotiations in which the players select from complete packages to present an "offer", the INSS article describes on Page 3, an implementation of what it calls Sequential negotiations, in which the players can select from a subset of predefined issues and options, so that a complete package does not need to be selected. That presumably, is why the players are also asked to rate the issues and their options separately as well as the different packages. In any case, there are still no changes in terms, since all the issues and options and ratings must still be predefined before the mock negotiation can begin.

Docket Number ET00-001CIP

PATENTS

An important problem that has to be mentioned here is the approximation of the utility. The utility function that is determined during the pre-negotiation phase has to be interpolated with new options being specified."

[Emphasis added]

While at first blush this might seem to suggest that a player can enter a new value during a mock negotiation, the last sentence makes it doubtful exactly what occurs.

First, for continuous issues, a "new value" must be an intermediate value—i.e. in the range of the previously defined values. If it is not an intermediate value, then all the ratings would have to be redone, in a pre-negotiation step. Recall that in the discussion of ratings, for each option supplied for an issue, one must be given the maximum value and one must be given a value of 0. Thus, if the ratings are to be useful at all, the only way a "new value" can be included for a continuous variable is if the new value is an intermediate value already in the range of the values which have been rated. This seems clear from the point made in the sentence "An important problem that has to be mentioned here is the approximation of the utility. The utility function that is determined during the pre-negotiation phase has to be interpolated with new options being specified."

The utility function (rating) that has been supplied for this issue and its previous options (values) has to be "interpolated" according to the above. Interpolation, as defined in Webster's New World dictionary, item 3 Math, means "to estimate (a missing functional value) by taking a weighted average of known functional values at neighboring points, as in estimating a specific, missing intermediate value on a table, esp. a logarithmic or trigonometric table." Thus, it would appear that the INSS

Docket Number ET00-001CIP

PATENTS

simulator or the NSS software would assign some rating to this intermediate value. However, it is not clear when that would be done—from the last sentence quoted it appears that this is done at the pre-negotiation phase. The article is ambiguous on this point. One way of reading this is that the interpolation might be done during a mock negotiation, but that is not what this appears to say.

Apparently this feature, and the feature described as new values for discrete issues, would allow a user to modify an existing negotiation case. But apparently this would still have to be done before the mock negotiation occurs as the discussion of the impact on utility functions (ratings) makes clear and as the general discussion of the operation of INSS in constructing offers makes clear. This apparently is also the reason why a "new" continuous value must be an intermediate value (in the example shown, somewhere between 10 and 30), since that would also be the only way INSS could interpolate a rating for it.

The discussion of new discrete values makes it even clearer that the players must go back to the pre-negotiation stages to enter ratings, as is said at page 5:

"Since there is no way to caculate [sic] the rating of new values based on the ratings of other options, the user would be required to enter the rating for any new discrete options."

Ratings can only be entered during the pre-negotiation phase. Because of the way in which INSS describes how a player selects an offer from pre-packaged sets, it seems logical to conclude that options 5 and 6 only allow someone to modify an existing case before another mock negotiation begins.

Docket Number ET00-001CIP

PATENTS

To see this, it helps to understand how INSS works and its terminology. At INSS page 6, under the heading "Describe a new negotiation case", the article states:

"You can request that a new negotiation case be set up for you by submitting this form. **Specify the issues**

At a minimum you must specify the names of the issues that will be negotiated, and the options that each issue may take. For example:

"Annual salary" - "50,000", "70,000" or "100,000" dollars.
"Vacation" - 2, 4 or 6 weeks." [Underlining emphasis added.]

In the glossary of the INSS article on page 19, an issue is defined as:

"A topic of discussion that is of particular interest in a negotiation. Each issue has a range of alternatives or options, one of which must ultimately be agreed upon by the negotiators in order to achieve a compromise."

And at Page 20, an option is defined as:

"One of the alternative values that an issue can take. For example, the issue "Tolerable product failure rate" may have the options "3%", "5%" and "10%".

In other words, an issue is similar to a term in a real negotiation. However, because this is a simulation using a simulation model or case, as seen here, all the possible values for an issue (term) must be defined in advance. In this instance, these values are supplied as what INSS calls "options". As noted above, the article says that to create a new case you must, at a minimum, specify the names of the issues that will be negotiated, and the options that each issue may take.

Again, on Page 8, under the headings "Using INSS: An Example", and "Negotiations between Maki and Suny", the article describes a sample negotiation case which has been set up by the article's authors to show how to use INSS:

Docket Number ET00-001CIP

PATENTS

This pre-definition is made even clearer on Page 17, where the INSS article states, under the heading "INSS FAQ (Frequently Asked Questions)", question no. 2:

"2. I have requested a negotiation already. When can I start my negotiation? Your negotiation will be set up typically within 2-3 days. INSS will notify you via e-mail, (specifying your negotiation name and user name), after which you can start your negotiation right away."

The set up mentioned here refers back to Page 6, "Describe a new negotiation case, where the article states, "You can request that a new negotiation case be set up for you by submitting this form."

Neither of the players who use the INSS simulator for a mock negotiation supply the values (options) for the issues during their mock negotiations. These values have already been programmed into the case they are using before the mock negotiation begins. In fact, unless one of the players is the one who requested that the case be constructed, neither of the players provides any input at all for "terms" (issues and their options) when he or she uses the INSS simulator.

Page 8, for example, shows the aircraft case which has been set up by the authors to show how to use INSS. In this example, players "Maki" and "Suny" do not supply any of the options for issues 1 and 2. Since the "terms" (issues) and all possible values (options) they can have are pre-programmed into a case before a mock negotiation can begin, there is no need for, and no disclosure of any analysis done by the INSS simulator to understand the purpose of the terms (issues). Unlike applicants' invention, which analyzes terms during iterations of a negotiation to understand their purpose, it is irrelevant to the INSS simulator whether an "issue" is a price term or a warranty term.

Docket Number ET00-001CIP

PATENTS

Applicants believe that a few lines in the article create the confusion on this point. On Page 3 of the INSS article, it states that INSS has a list of 9 options under the heading "Negotiation Protocol." The list is preceded by a paragraph which states that "At present INSS allows to construct a protocol from three options listed below." In that list, Option 5 is "New values for continuous issues and Option 6 is New values for discrete and ordered issues and item 7 is New issues.

Directly below this, the article states under the heading "How to choose?" :

'Because the additional options listed above are not yet implemented you don't need to choose any specific protocol now. The three options already implemented provide you with additional flexibility in conducting negotiations.'

These seem to suggest that users might be able to enter new values for issues under options 5 and 6. However, this also seems to say that only the first three options are implemented –not options 5, 6 and 7. However, even if they are deemed to have been implemented Applicants do not believe they change the above analysis.

For example, in the discussion of " New values for continuous issues" the INSS article states:

"This option will allow to enter any value for a continuous issue other than the values specified at the beginning of negotiations. The continues {sic} issue {sic} are those for which intermediate values make sense. Price, for example, is a continuous issue. The initial values may be \$10, 420{sic} and \$30. The option allows users to enter value {sic} of, for example, \$15 which initially {sic} had not been an option.

Here we will also allow quasi-continuos {sic} issues which are naturally ordered but for which ratios or some other numbers make no sense. For example, such an issue is the project completion time or product delivery time. It does not make sense to talk about delivery time of 1.75 days. However, we will leave this problem to the users and assume that they will select numbers that make sense in their negotiations.

Docket Number ET00-001CIP

PATENTS

Remarks:

Claims 2-17, 26-41, 50, 51, 60-70, 77-87, and 98 were rejected under §102 as being anticipated by the INSS article, and under §103, as being obvious in view of the INSS article. Claims 99-162 have been added.

Anticipation under §102:

The rejection stated that the fact that INSS maintains offer history data to determine if an optimal agreement has been reached or to suggest a Pareto-Optimal agreement for both parties is indicative of the fact that INSS itself analyzes and understands the negotiation terms.

Applicants respectfully disagree. INSS is not a negotiations system, it is not analyzing terms during iterative processing to understand the purpose of the terms, it does not identify which terms relate to which party, it does not recognize changes in terms, and it does not recognize at least one party as a deciding entity.

The INSS system does not do any analysis to understand the purpose of terms to generate a Pareto-optimal agreement for both parties, nor does it identify which terms and inputs relate to which party and are significant to the Pareto-optimal analysis. The INSS article makes clear in discussing how to "Describe a new negotiation case", that all the terms and values for the mock negotiations are provided to the INSS system by whoever builds the case before any mock negotiation begins. As will be seen, this eliminates the need for any analysis of terms to understand their purpose, whether to

Docket Number ET00-001CIP

PATENT'S

Similarly, option 7, New issues is described on Page 5 as:

"New issues can be brought to the negotiation table during or even before the negotiation begins. This allows INSS users to make their own negotiation case online or extend greatly their current negotiation." The only description of how this might be implemented, if it was ever implemented, has already been covered above in the discussion of creating a new case. A new case can be created by predefining all the issues and options ahead of time, as described on page 6 of the INSS reference, the very next page after this discussion.

Another paragraph in the article which seems to suggest more than it actually offers occurs on Page 2, under the heading "4. Negotiation support system":

"INSS can also act as an NSS and support and facilitate real-life negotiations. The system is designed so that two parties who can agree on the issues and the possible options for those issues can negotiate over the Web. This is an obvious advantage when the parties are widely separated and may have difficulty arranging meetings. Using INSS is also helpful when post-settlement improvement is likely." [Underlining emphasis added.]

Again, at first blush, this seems to offer more scope for INSS, but it is only helpful if the "two parties can agree on the issues and the possible options for those issues." In INSS terms, this means the parties must create a new negotiation case which predefines all the values for the issues and options, as discussed above. Those familiar with real life negotiations realize that it is unlikely that this will occur—most of a real world negotiation is about the value to be assigned to an issue as a negotiation progresses through a series of iterations.

In any case, if the parties were to agree to a predefined set of values for the issues and options, the INSS system would still only be able to provide NSS support—that is, perform the Pareto-optimal determination based on the parties' ratings and perhaps

Docket Number ET00-001CIP

PATENT'S

suggest better packages. This might be helpful, but it is not a negotiations system. It is using a simulator for providing a negotiation support system function, not analyzing terms to understand their purpose or recognizing changes in terms. The authors of the INSS article clearly recognize this when they preface this discussion by saying that INSS can act as an NSS and support and facilitate (but not process) real-life negotiations.

While it might be argued that simulators may sometimes anticipate functionality for purposes of patentability, applicants submit that in computer hardware and software development, simulation tools have long been used to feign functionality that is still under development. If a manufacturer is developing a new operating system and new computer hardware at the same time, it is common for developers to use simulation tools to mimic functionality yet to be developed. The real operating system may be interfaced to a simulation model that pretends to operate as the hardware should, even if the hardware developers do not yet know how to implement the hardware. The operating system may pass a value to the simulation tool, which "pretends" to operate on it, but simply returns to the operating system a pre-programmed answer for that value. The simulation tool could be said to be performing the same functionality as the as yet undeveloped hardware, without necessarily anticipating the later hardware features actually developed.

In any event, applicants respectfully submit that it has now been shown that INSS does not perform the same functionality recited in Applicants' claimed invention and does not anticipate, disclose, teach, nor render obvious Applicants' invention. The authors of the INSS paper do not describe it as a negotiation system. They are quite clear that it can be used as a game, a demonstration decision support system, a negotiation simulator, a

Docket Number ET00-001CIP

PATENTS

demonstration negotiation support system or a research and training tool but they do not disclose or describe it as a negotiation system.

The descriptions of how to create a case in order to use the simulator make it clear that all the possible values and issues must be identified, specified, and predefined before a negotiation can be simulated. Since all the issues and options are defined in advance, the INSS software does not analyze terms to understand their purpose, nor does it recognizes changes in terms. It can only deal with pre-programmed issues and options.

The description on Page 15 of how "offers" are constructed from the predefined, pre-rated packages, makes it clear that the players do not change any terms (issues and options) during their mock negotiation. They "offer" the predefined packages or subsets of them to each other until they reach an "agreement" in their mock negotiation. Since there are no changes in the terms during such a mock negotiation, the INSS system cannot recognize changes.

The rejection also stated that, INSS recognizes which party is officially waiting for a response, thereby recognizing a relative 'deciding entity.' See page 17, item 5 in particular."

Applicants respectfully disagree. First, applicants can find no instance in the article which states that INSS recognizes which party is officially waiting for a response.

In fact, it would seem that the opposite is true—the INSS system is indifferent to which party to a mock negotiation is "officially" waiting for a response. At Page, 14, under the heading "1. Introduction" it states:

Page 49 of 55

None of these suggests that INSS recognizes either player as "officially" waiting for a response. Instead, because these cites suggest that either party can send multiple offers to the other without receiving any response, it is clear that there is no "official" waiting for response status that would suggest INSS recognizes the one waiting as a relative deciding entity. Nor does the ability to send multiple offers make either party a deciding entity.

Applicants respectfully submit that INSS does not recognize either player as a deciding entity, but, on the contrary, as is stated on Page 16, it would appear that the INSS simulator and NSS functions determine when negotiations are concluded:

Page 50 of 55

BEST AVAILABLE COPY

Docket Number ET00-001CIP

PATENTS

"11. When both you and your partner accept an offer, it is called an agreement. (sic) INSS will tell you whether your agreement is "optimal", or whether it is possible to improve it and move towards a better agreement." 12. If INSS says you have reached the end of negotiation, fill out the post-negotiation questionnaire. Otherwise you have the choice of making more offers till you reach a better agreement, or stopping at this point. In any case fill out the questionnaire when you reach the end of the negotiation." [Bolding emphasis added]

From this, it would seem that neither party is a deciding entity. The INSS simulator decides whether a negotiation is ended.

In summary, INSS as disclosed and described in the article cited does not, in any way, perform the functionality of Applicants' claimed invention, nor would it render it obvious. INSS is not a negotiations system. INSS does not analyze terms to understand their purpose, nor does it recognize changes in terms, nor does it recognize a party as a deciding entity. In fact, to the extent that INSS requires predefinition of values it teaches away from Applicants' invention and relates to older art on simulation tools and decision theory, not to Applicants' invention. Consequently, Applicants respectfully submit that this basis for rejection has been overcome and that Claims 2-17, 26-41,50, 51, 60-70, 77-87, and 98 as well as new claims 99-162 are in condition for Allowance.

Obviousness under §103: The rejection states that the use of unique identifiers, and maintaining records as an audit function would be obvious to one of ordinary skill in the art, and would not, by themselves, render the claims patentable in view of INSS. Applicants respectfully submit that this is a moot point since the rejection based on §102 has been overcome. Consequently, Applicants respectfully submit that this basis for rejection has been overcome and that Claims 2-17, 26-41,50, 51, 60-70, 77-87, and 98 as well as new claims 99-162 are in condition for Allowance.

Page 51 of 55

and again at Col. 24, lines 45-58: [Emphasis added]

and again at Col. 24, lines 45-58:

While some users of the present invention may want to install parts of it locally, it is another advantage of the present invention that it can also be used for a "one-time" or "nearly instantaneous" community negotiation. Turning briefly to Figure 1c, if the sponsor of community CB is a standards body, it could create a community Website for the negotiation of a particular standard, enlist participants, and encourage and monitor the negotiations without anyone having to buy or install additional local hardware or software. When the negotiation is complete and the concluding agreed upon standards document can be made available to all concerned, the community could be "dismantled" and the participants could disband without wasting any hardware or software installations and expense. [Emphasis added]

and again at Col. 27, lines 43-64:

In this diagram, it is assumed that a seller is registering for the first time with a sponsored commerce community. Other types of communities might vary this processing. First, at step 400, the seller chooses from one or more templates provided by multivariate negotiations engine system 02, based on the level of cost and functionality the seller desires. Sample website pages constructed from such templates by a hypothetical company named Exports, Inc., are shown in Figures 31a to 31d.

Next, at step 405 in Figure 4a the seller provides basic information as prompted by the system through a setup screen such as that shown in Figures 10-1-10-3. Portions of the demographic information collected there, along with other data collected later is automatically formatted along with the META tags and Meta Keywords for automatic submission to search engines. At step 410 in Figure 4a, the system presents the community's standard license agreement and terms to the seller. If the seller agrees to the terms at decision block 425, processing continues. If the seller does not agree, the seller may proceed to block 420 to negotiate with sponsor or elect not to participate. [Emphasis added]

and at Col. 15, lines 7-12:

Page 53 of 55

names, passwords and access levels for each inquirer. [Emphasis added]

and again at Col. 23, lines 24-41:

Still in Figure 1d, the principal functions of the present invention operate as part of Webserver software 210s executing in Webserver hardware 210w. Multivariate negotiations engine 212 is the central function, with sponsor functions 213, participant functions 214, external functions 211 and network functions 207 working in cooperation with it. All of these, in turn, communicate through the IP firewall 203f, to database functions 222, operating with database server system 220, to maintain database(s) 225.

Page 54 of 55

BEST AVAILABLE COPY

Docket Number ET00-001CIP

PATENTS

Security of sponsor and participants' communications is provided at the Webserver level through secured socket layer (SSL) encryption schemes offered by most Webserver software products, while an additional layer of security is provided by restricting access to database server computers 230, where databases 225 resides, by use of IP firewall 203f. Thus, the present invention enables the collection and storing of negotiations and results data in a highly secure hosting environment over a public network.

Consequently, Applicants respectfully submit that the instant application be granted the priority date claimed.

Applicants respectfully submit that all bases for rejection have been overcome, that the instant application should be granted the priority date claimed and that Claims 2-17, 26-41,50, 51, 60-70, 77-87, and 98 as well as new claims 99-162 are in condition for allowance. Reconsideration of all the claims is requested. Allowance of Claims 2-17, 26-41,50, 51, 60-70, 77-87, and 98 as well as new claims 99-162 at an early date is solicited.

Applicants' Attorney respectfully requests that if she can be of any further assistance in putting all the claims in condition for allowance that she be reached by telephone at 508-653-8143 in order to discuss the application with the Examiner, so that any new objections or rejections may be addressed.

Respectfully submitted,



Maureen Stretch
Reg. No. 29,447
26 Charles Street
Natick, MA 01760
5/5/2006

Docket Number E100-001CIP

PATENTS

"Participants in the negotiation are paired randomly and anonymously. Your partner may be from your city, country or from far away: a different country, a different continent. Please log in at least once in two days to check whether there has been any activity. If you have provided an e-mail address, INSS will send you a note when your counterpart makes an offer, but it is better not to rely on these e-mails; do log in frequently."

Also, on Page 15, under the heading "3.Using INSS", it states:

8. Make an offer to your partner using the menus in the offer-box. You can also send messages to your partner using the message-box.
9. You will then have to wait for your partner to respond to your offer. Come back later (say the next day) and login to INSS using the same negotiation name, user-name and password. INSS will show you whether your partner has sent you a response. Keep checking till you get a response. If you like, you can continue to send messages or new offers to your partner." [Underlining emphasis added]

And the section cited in the rejection at Page 17, item 5 reads:

"5. I have sent an offer and my counterpart has not yet responded to it. INSS shows me a "Waiting for response" page. Can I send a second offer instead of waiting?
Yes, you can make consecutive offers without waiting for your counterpart. Click on the "Make an offer" link in the menubar at the bottom of your page. There is also a link in the menubar that allows you to just "Send a message" instead of an offer."

None of these suggests that INSS recognizes either player as "officially" waiting for a response. Instead, because these cites suggest that either party can send multiple offers to the other without receiving any response, it is clear that there is no "official" waiting for response status that would suggest INSS recognizes the one waiting as a relative deciding entity. Nor does the ability to send multiple offers make either party a deciding entity.

Applicants respectfully submit that INSS does not recognize either player as a deciding entity, but, on the contrary, as is stated on Page 16, it would appear that the INSS simulator and NSS functions determine when negotiations are concluded:

Docket Number ET00-001CIP

PATENTS

Priority.

The Examiner rejected applicants' priority claim for the instant application, because the phrases "dynamic contracts manager" and "security extensions such as access control lists, privilege lists, etc." were not disclosed in the parent applications, such as US Patent No. 6,141,653.

Applicants respectfully disagree. As this application claims, the dynamic contracts manager supplies an initial set of terms for use by a user. As stated in the instant application at Page 79, this functionality operates in conjunction with the sponsored community function of the parent applications.

Applicants respectfully submit that support for this functionality is found in the above referenced parent application at Col. 17, lines 46-47:

The sponsoring standards body establishes the community, proposes initial standards, sets the rules for negotiations, encourages and monitors negotiations, and concludes with a finally agreed upon set of standards, with each step of each negotiation that occurred along the way archived. [Emphasis added]

and again at Col. 20, lines 6-18:

In a commerce community, the participants might be grouped as sellers 08grpa and buyers 08grpb. Seller participant 08grpa functions include automatically integrated remote Web authoring 214-02 and processing and administration 214-04. In remote Web authoring 214-02, the present invention allows a seller registering with the sponsored community, to automatically create a seller's Website within the community,

Docket Number ET00-001CIP

PATENTS

on completion of registration. The seller selects from several Website format templates provided by the present invention and as the seller "fills in the blanks" in a selected template, the information is automatically integrated with the rest of the system, so that orders can be processed and accepted immediately...[Emphasis added]

and again at Col. 23, lines 61-67:

In non commercial communities, such as standards communities or treaty negotiation communities, a sponsor 06 may wish to designate multiple deciding entities for each issue under consideration. In such an implementation, a sponsor 06 will usually want to establish more detailed rules for the ordering and processing of proposals. [Emphasis added]

and again at Col. 24, lines 45-58:

While some users of the present invention may want to install parts of it locally, it is another advantage of the present invention that it can also be used for a "one-time" or "nearly instantaneous" community negotiation. Turning briefly to Figure 1c, if the sponsor of community CB is a standards body, it could create a community Website for the negotiation of a particular standard, enlist participants, and encourage and monitor the negotiations without anyone having to buy or install additional local hardware or software. When the negotiation is complete and the concluding agreed upon standards document can be made available to all concerned, the community could be "dismantled" and the participants could disband without wasting any hardware or software installations and expenses. [Emphasis added]

and again at Col. 27, lines 43-64:

In this diagram, it is assumed that a seller is registering for the first time with a sponsored commerce community. Other types of communities might vary this processing. First, at step 400, the seller chooses from one or more templates provided by multivariate negotiations engine system 02, based on the level of cost and functionality the seller desires. Sample website pages constructed from such templates by a hypothetical company named Exports, Inc., are shown in Figures 31a to 31d.

Next, at step 405 in Figure 4a the seller provides basic information as prompted by the system through a setup screen such as that shown in Figures 10-1-10-3. Portions of the demographic information collected there, along with other data collected later is automatically formatted along with the META tags and Meta Keywords for automatic submission to search engines. At step 410 in Figure 4a, the system presents the community's standard license agreement and terms to the seller. If the seller agrees to the terms at decision block 425, processing continues. If the seller does not agree, the seller may proceed to block 420 to negotiate with sponsor or elect not to participate. [Emphasis added]

and at Col. 15, lines 7-12: